

FORCE OF THE SEA

Terrific Power Is Generated When
a Cyclone Rages.

THEN THE WATERS RUN WILD

All Regularity of Wave Motion Ceases
as the Sea Burests Its Bounds—Gran-
ite Blocks Weighing a Thousand Tons
Tossed About Like Pebbles.

A pond troubled by a pebble gives a comprehensive idea of the mechanism of the perpetual motion of the ocean, now slow, regular and majestic, now rushing in ungovernable fury against the land. When a pebble falls in a pond it produces a fine circular line, which widens, multiplying until stopped by its boundaries. Just so is produced the surging of the sea.

To judge from appearances, the swells transport the water toward the circumference of the pond. In point of fact they do nothing of the kind, as is easily proved by a match or splinter of wood being cast upon the water. The match is hardly raised or lowered by the passage of the swell. The action in evidence is simply the transmission of motion, not the transmission of matter.

The fine waves of the sea are generated by the wind as fine waves are generated by the wind when it ripples a field of grain ready for the harvest. The waves that run over the field of grain are real waves, often waves in force action. The spears of grain are immovably fixed to the ground by their roots, but every blade transmits its oscillatory movement to the next blade. Just so liquid molecules are formed.

In the middle of a vast ocean, such as the equatorial Atlantic, for instance, great regular undulations are seen multiplying in parallel like the furrows in a vast plowed field. On the broad ocean the liquid mounds of the sea rise with every swing with more or less even regularity.

The mariner's imagination has given the great waves of the high sea the reputation of fabulous height. Reliable authors have talked of waves mountain high and of waves 120 feet in height. Exact measurement has given a closer estimate.

The waves of the high sea, of the major oceans, attain the height of fifty feet under the exceptional conditions of a tempest in the vicinity of Cape Horn and the Cape of Good Hope. The surges here estimated are given in free circulation on the high seas.

When a wave, whatever its strength or its weakness, meets a solid obstacle, whether that obstacle be a rocky cliff or a ship, the swell rebounds to extraordinary heights. Lighthouses are often swept by the sea from base to summit.

The length of waves is between twenty and thirty times their height, and the slope of the sea's hills is very gentle. A wave sixty feet high is somewhere between 1,000 and 1,200 feet long.

At the axis of the revolving tempest called a cyclone there are many wave systems, moving in all directions, meeting and combining. When the cyclone is in action the sea is said to "burst its bounds."

At such a time all regularity of wave succession ceases, and the sea runs wild, with force beyond human power to estimate. Blocks of granite weighing from 1,000 to 1,200 tons are caught by the sea and rolled like pebbles to distances of 300 feet and more, and sea walls are splintered as by hatchets. The "live power" of a furious sea is estimated by multiplying the mass of the surge by the square of its speed.

When the surf, impelled by the drive of the broad sea, meets a solid obstacle its pressure is thirty tons per square meter of water. This estimate, which is close, explains how water, when continually sapping the foot of a cliff, breaks down the land, forces back the shore line and little by little, constantly and surely, increases the sea's domain.

A wave from 33 to 35 feet high and 625 feet long—such a wave as the sea produces every eighteen seconds—represents power of about 1,350 horsepower, steam, per square yard.—Harper's Weekly.

Orators and Stimulants.
It is believed that no modern legislators keep themselves up to the mark in the same dangerous way as some of their predecessors in the British parliament. "Huskisson told me," writes Lord Brougham, "that Lord Castle-reagh and Lord Liverpool both took ether to keep them going when speaking. He also told me that he once asked Mr. Wilberforce what made his fingers so black, and Wilberforce told him that he was in the habit of taking opium before a long speech, 'and to that,' said he, 'I owe all my success as a public speaker.'"

A Suggestive Song.
"Miss Soulsby has not a particle of tact."
"What has she done now?"
"The other evening when Mr. Jaggles, who is notorious for not paying his debts, asked her to sing she went to the piano and sang 'Trust Him Not!'"—London Telegraph.

Not Affinities.
Mistress—And why did you leave your last place? Maid—Me and the missus was not congenial.—Harper's Bazar.

It is a wise man who knows when he does not know.

"FIGHTING BOB" EVANS.

His Meeting With His Confederate Brother and the Result.

Tradition has it that after young Robley D. Evans went to Annapolis he wasn't long in showing his mettle. The story of his first assertion of his personality runs after this fashion: When he left for the Naval academy his mother gave him a framed copy of the Lord's Prayer and instructed him to hang it over his bed. He complied, notwithstanding the fact that the rules of the academy forbade the placing of decorations in the rooms. An inspector remonstrated with him and ordered him to remove the prayer. Evans swore that he would smash the face of the first man who touched it. The inspector referred the act of insubordination to the commandant, who took it up with the secretary of the navy. Evans wrote home about the episode. It got into the papers. An indignation meeting was held in his home town and a protest made to the president. In the end a special dispensation was granted, allowing the cadet to keep his "decoration."

Being a Virginian, young Evans was urged by his mother to throw in his lot with the south when the civil war came. This he declined to do, so it fell out that he and his brother fought on opposite sides during the civil war. On one occasion Robley Evans entered a restaurant in Washington and observed his brother eating.

"An exchange of glances between us was quite enough," said Evans afterward. "Not a word was spoken by either of us. He paid his bill and hastily left the place, knowing very well that I would report his presence in the city. I ordered more oysters than I wanted and took plenty of time to eat them. He had come across the Potomac in a skiff, I was sure, and had tied it to an old sycamore tree near the spot where we used to swim. I wanted to give him a brotherly chance to get back to Virginia soil. He gained his boat and escaped, though a soldier fired at him in the darkness. On leaving the restaurant I met an officer of the provost guard and informed him that there was a Confederate soldier in Washington."

"How do you know?" he asked.
"That," I replied, "is none of your business."

"I was arrested and taken to the provost marshal, who, on hearing my story, let me go."—Chicago Record-Herald.

Why 1881 Was Chosen.
In 1881 a so-called prophecy of Mother Shipton's was in every one's mouth: "The world then to an end shall come 'Tis eighteen hundred and eighty-one. A traveling tailor denied inspiration to this prognostic, nor, as now appears, was it remarkable for accuracy. But he went further. He demonstrated in the dust of the road why that exact date was chosen. Not only was it cabalistic, a multiple of nine, etc., but it was the only date available to Mother Shipton which in Arabic numerals was the same backward, forward and upside down. Eleven hundred and eleven was past, and not till 1881 would the coincidence recur. The next Mother Shipton will select 8008, which is not tomorrow or next day.—London Saturday Review.

Translation.
Schubert's well known "Lied des gefangenen Jagers" is a setting of Herder's German translation of Scott's lyric, "My hawk is tired of perch and hood," the second line of which—
"My idle greyhound loathes his food—
runs in the German as follows:
Mein musiger Windhorn sein Futter ver-schmahet.
In by far the largest collection of Schubert's songs published with English words this line appears with the following English text:
My musical windhorn its nutter hath stilled.
Which could only have been perpetrated by some one to whom English and German were equally unknown.—London National Review.

Easy to Keep Afloat.
If every person knew that it is impossible to sink if one keeps his arms under water and moves his legs as if he were going upstairs and that one may keep this motion up for hours before fatigue ends it there would be few casualties. Such is the fact. Except where cramp renders motion impossible the man who gets an involuntary ducking has small chance of drowning. He can generally keep afloat until rescuers appear. The people who drown are those who frantically wave their arms out of water and lose their self-possession.

Mathematical Snakes.
Gazing at a collection of serpents at the zoo, the rural visitor observed, "My gracious, those snakes must multiply rapidly!"
With a twinkle in his eye the keeper replied, "Some kinds do, but these particular ones are adders."—Judge's Library.

The Proper Caper.
Ascum—Tell me which is proper. Would you say "It is possible for two to live on \$10 a week" or "on \$10 weekly"? Wise—Well, I'd say "It is possible for two to live on \$10 a week weekly."—Catholic Standard and Times.

Very Mean.
He—I believe that every man should do something to advance scientific knowledge. When I die I shall leave my brain to science. She—Stingy thing.—Judge.

We should be surprised not at our good deeds, but our bad ones.—Philips Brooks.

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Twain In His Boyhood Days.

A BAD SCARE ENDED THE FUN

The Final Prank on Holiday's Hill
Was In a Fair Way of Ending In a
Tragedy When the Danger Was, by a
Bit of Good Luck, Narrowly Averted.

Writing on "Mark Twain" in Harper's Magazine, Albert Bigelow Paine recounts some of the scrapes of the youthful Sam Clemens. Sam was a recognized ringleader among his play mates, and one of the pranks they played nearly had a fatal termination. "One of their Sunday pastimes was to climb Holiday's hill and roll down big stones to frighten the people who were driving to church. Holiday's hill above the road was steep. A stone, once started, would go plunging and leaping down and bound across the road with the deadly swiftness of a twelve inch shell. The boys would get a stone poised, then wait until they saw a team approaching and, calculating the distance, would give it a start. Dropping down behind the bushes, they would watch the dramatic effect upon the churchgoers as the great missile shot across the road a few yards before them.

"This was Homeric sport, but they carried it too far. Stones that had a habit of getting loose so numerously on Sundays and so rarely on other days invited suspicion, and the 'patterrollers'—river patrol, a kind of police of those days—were put on the watch. So the boys found other diversions until the patterrollers did not watch any more. Then they planned a grand coup that should eclipse anything before attempted in the stone rolling line.

"A rock about the size of an omnibus was lying up there in a good position to go downhill, once started. They decided it would be a glorious thing to see that great boulder go smashing down a hundred yards or so in front of some unsuspecting and peaceful minded churchgoer. Quarrymen were getting out rock not far away and left their picks and shovels over Sundays. The boys borrowed these and went to work to undermine the big stone. It was a heavier job than they had counted on, but they worked faithfully Sunday after Sunday. If their parents had wanted them to work like that they would have thought they were being killed.

"Finally one Sunday while they were digging it suddenly got loose and started down. They were not quite ready for it. Nobody was coming but an old colored man in a cart, so it was going to be wasted. It was not quite wasted, however. They had planned for a thrilling result, and there was thrill enough while it lasted. In the first place, the stone nearly caught Will Bowen when it started. John Briggs had just that moment quit digging and handed Will the pick. Will was about to step into the excavation when Sam Clemens, who was already there, leaped out with a yell:

"Look out, boys; she's coming!"
"She came. The huge stone kept to the ground at first, then, gathering a wild momentum, it went bounding into the air. About halfway down the hill it struck a tree several inches thick and cut it clean off. This turned its course a little, and the negro in the cart, who heard the noise, saw it come crashing in his direction and made a wild effort to whip up his horse. It was also headed toward a cooper shop across the road.

"The boys watched it with growing interest. It made longer leaps with every bound, and whenever it struck the fragments and dust would fly. They were certain it would demolish the negro and destroy the cooper shop. The shop was empty, it being Sunday, but the rest of the catastrophe would invite close investigation and results. It was making mighty leaps now, and the negro had managed to get directly in its path. They stood holding their breath, their mouths open.

"Then suddenly—they could hardly believe their eyes—the boulder struck a projection a distance above the road and, with a mighty bound, sailed clear over the negro and his mule and landed in the soft dirt beyond, only a fragment striking the shop, damaging but not wrecking it. Half buried in the ground, that boulder lay there for nearly forty years. Then it was blasted for milling purposes. It was the last rock the boys ever rolled down. They began to suspect that the sport was not altogether safe.

"Lamplight and the center of the stage was a passion of Sam Clemens' boyhood, a love of the spectacular that never wholly died. It seems almost a pity that in those old faroff, barefoot days he could not have looked down the years to a time when, with the world at his feet, venerable Oxford should clothe him in a scarlet gown."

Her Resentment.
Alice—It's mean of you to tell people that when Jack kissed me I didn't resent it. Maud—I didn't, dear. On the contrary, I said that when he kissed you on the cheek you held it up against him for quite awhile.—Boston Transcript.

Our Language.
"Now you know you're all wrong about that."
"Oh, yes; if you say so, I reckon I'm all wrong, all right."—Chicago Tribune.

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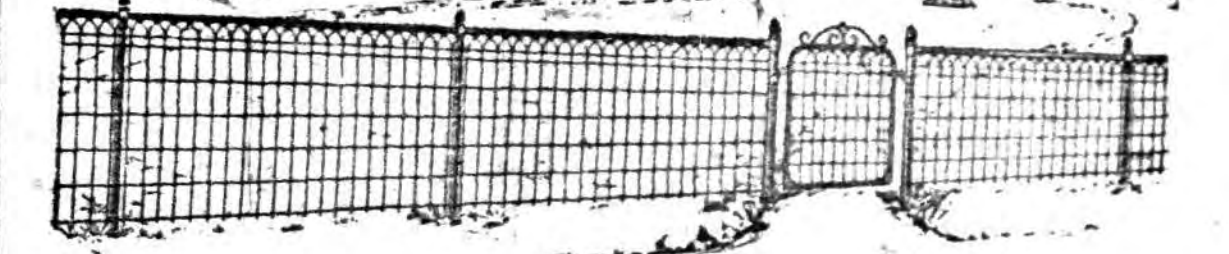
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The H

A Story of
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By F

The tourist who Rhine sees high either bank rural feudal barons turn of mind m holds peopled w and women. There lived the and again to the ute from men down the lions for himself, dis those who did n In one of the stands out ag ruin, dwell th raid. Below t into the Rhine boat station ex trees a short di When a craft die was seen go down to th boats, and whe opposite the m shoot out to times the un tected by ar would be a fig tom house usu chant would lo Among the h time was her At times when home, when a coming, she v the revenue p collect the tr admired by a castle, who w any harm to c brave as the r ate was excit tect her was would often d serving again. So great was that she awo per who coul want so far b breast a rub heart to sign aspired to her place the pol spot evidence beating

One morn which the cast away, and w postern and n tha, looking f their leader slenderly mad His face was and his long meath his c lace collar very pleasing the maiden that could w were wanti of intellect the opened a young man His coming Count Hub ger of the d demond on hundred ar to fight a Bertha rep sent, but the were welo dli the bar cepted the followers w stabled.

Now, the ty yielded grudgingly of separated ed, and the to enforce ting that h main at ho by his d farers, s visiting him that he m until the m should go elsewhere. But this the girl's taught sl the spurs and she d possible t Count B under the witchery. But the heart on his sword was rath of arms. When the does known. commo realise w a desire had attr opportu them a So she soon ma pleasure escort. I wanted sides, it will c who t Now an